NPDES GENERAL PERMIT
FOR
FINAL REUSE AND DISPOSAL OF SEWAGE SLUDGE
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ADDENDA

Part I. Coverage Under this Permit

A. Permit Area.

The permit covers all areas administered by Region 6 in the State of Arkansas.

B. Coverage and Eligibility.

Unless excluded from coverage in accordance with Part I, paragraph C or D below, treatment works treating domestic sewage (TWTDS) that are defined in 40 CFR Subpart 122.2 and are subject to the requirements of 40 CFR Part 503 and 40 CFR Part 258 are authorized under the terms and conditions of this permit.

1. Permittees must retain on site a copy of the permit.
2. TWTDS With Expired Permits or Pending Applications. All facilities which have expired permits and have reapplied in accordance with 40 CFR Subpart 122.21(d); and all facilities which have submitted applications in accordance with 40 CFR Subpart 122.21(a) are automatically covered by the terms of this permit. A permittee may request to be excluded from coverage by this permit by applying for an individual permit in accordance with 40 CFR Subpart 122.28(b)(2)(iii).

C. Limitations on Coverage.

The following activities are not covered by this permit; TWTDS that the Director has determined to be or may reasonably be expected to pose a potential threat to human health and the environment due to toxic pollutants or, which have been notified by the Director to file for an individual or alternative general permit in accordance with Part I, D. (below) of this permit.

D. Requiring an Individual Permit or an Alternative General Permit.

1. The Director may require any person authorized by this permit to apply for and obtain either an individual sewage sludge permit or an alternative sewage sludge general permit as provided in 40 CFR Subpart 122.28(b)(2) or (3). The Director will notify the owner or operator in writing that a permit application is required. If an owner or operator fails to submit an individual permit application in a timely manner required under this paragraph by the Director, then the applicability of this general permit to the individual permittee is automatically terminated at the end of the day specified for application submittal.

2. Any owner or operator authorized by this permit may request to be excluded from the coverage of this permit by applying for an individual permit as provided in 40 CFR Subpart 122.28(b)(2)(iii). The owner or operator shall submit application information as required by 40 CFR Subpart 122.21(c)(2) to the Director with reasons supporting the request.

3. When an individual permit is issued to an owner or operator otherwise subject to this permit, or the owner or operator is approved for coverage under an alternative general permit, the applicability of this permit to the facility is automatically terminated on the effective date of the individual permit or on the date of approval for coverage under the alternative general permit. When an individual permit is denied to an owner or operator otherwise subject to this permit, or the owner or operator is denied for coverage under an alternative general permit, the permittee is automatically reinstated under this permit on the date of such denial unless otherwise specified by the Director.

E. Permit Expiration

Coverage under this permit will expire five (5) years from the date of issuance. The conditions of an expired permit continue in force until the effective date of a new permit (40 CFR Subpart 122.6).

F. Endangered Species Protection.

Permit Coverage Restrictions: In order to be eligible for coverage under this permit, the applicant must comply with the Endangered Species Act. Land application, surface disposal, or disposal of sludge in a municipal solid waste landfill may be covered under this permit only if either:

1. Sewage sludge activities are not likely to adversely affect species identified in Addendum A of this permit; or
2. The applicant's activity has received previous authorization under the Endangered Species Act and established an environmental baseline that is unchanged; or,
3. The applicant is implementing appropriate measures as required by the Director to address adverse affects. All TWTDS applying for coverage under this sewage sludge general permit must certify that their activities regarding the generation, treatment, land application for beneficial reuse, surface disposal, or disposal of sludge in a municipal solid waste landfill are not likely to adversely affect species identified in Addendum A of this permit.

G. National Historic Preservation Act.

In order to be eligible for coverage under this permit, the applicant must be in compliance with the National Historic Preservation Act. Activities associated with the generation, treatment, land application for beneficial reuse, surface disposal, or disposal of sludge in a municipal solid waste landfill may be covered under this permit only if:

1. Operations do not affect a property that is listed or is eligible for listing in the National Historic Register maintained by the Secretary of Interior; or,
2. The applicant has obtained and is in compliance with a written agreement between the applicant and the State Historic Preservation Officer (SHPO) that outlines all measures to be undertaken by the applicant to mitigate or prevent adverse effects to the historic property.

Part II. General Permit Conditions

A. The permittee shall comply with all conditions in this permit. Failure to comply with this permit constitutes a violation of the Clean Water Act (CWA) and is grounds for an enforcement action or for modification, revocation and reissuance, or termination of the permit.

B. The permittee shall take all reasonable steps to minimize or prevent any sludge use or disposal practice which violates this permit and which also has a reasonable likelihood of adversely affecting human health or the environment.

C. Violation of a permit condition may result in imposition of a civil penalty of up to $25,000 per day for each violation. Alternatively, violation of a permit condition may result in imposition of administrative penalty assessed by the U.S. Environmental Protection Agency.

D. Negligent violation of a permit condition may result in imposition of a fine ranging from $2,500 to $25,000 per day for each violation; or imprisonment for up to one year; or both a fine and imprisonment.

E. Knowing violation of a permit condition may result in imposition of a fine ranging from $5,000 to $50,000 per day for each violation; or imprisonment for up to three years; or both a fine and imprisonment.

F. If the only means whereby the permittee can maintain compliance with the conditions of this permit is to halt or reduce the permitted activity,

then the permittee's failure to do so shall not constitute a defense in an enforcement action against the permittee.

G. The permittee shall properly operate and maintain all facilities and systems of treatment and control, with all related appurtenances, including adequate laboratory controls and appropriate quality assurance procedures, which have been installed or used by the permittee for the purpose of achieving compliance with the conditions of this permit. The permittee shall also properly operate and maintain backup or auxiliary facilities or similar systems when their operation is necessary to achieve compliance with the conditions of this permit.

Part III. Inspections and Information

A. The permittee shall furnish to the permitting authority, within a reasonable time, any information requested for the purposes of determining compliance with the permit or determining whether cause exists for modifying, revoking and reissuing, or terminating this permit. The permittee shall also furnish, upon request of the permitting authority, copies of any records required to be kept under the conditions of this permit.

B. The permittee shall allow a properly credentialed representative of the permitting authority to perform the following functions: (1) Enter the permittee's premises where a regulated facility is located, where a regulated activity is being conducted, or where records are required to be kept under the conditions of this permit. (2) At reasonable times, have access to and copy any records required to be kept under the conditions of this permit. (3) At reasonable times, inspect any facilities, equipment (including monitoring and control equipment), practices, or operations either regulated or required under this permit. (4) At reasonable times, sample and monitor any substances, parameters or practices at any location, either for the purposes of assuring permit compliance or as otherwise authorized by the CWA.

Part IV. Notification Requirements.

A. Deadlines for Notification

1. Existing Facility. Except as provided in paragraphs IV.A.3. (New Operator), and IV.A.4. (Late Notification) of this Part, individuals who intend to obtain coverage for an existing TWTDS where sludge is generated, treated, land applied for beneficial reuse, surface disposed or disposed in a municipal solid waste landfill under this general permit shall submit notification to the EPA in accordance with the requirements of this part on or before 90 days after permit finalization;

2. New Facility. Except as provided in paragraphs, IV.A.3. (New Operator), and IV.A.4. (Late Notification) of this part, operators of facilities that begin operations after 90 days after permit finalization shall submit a notification to the EPA in accordance with the requirements of this part at least 2 days prior to the commencement of the industrial activity at the facility;

3. New Operator. Where the operator of a facility that is covered by this permit changes, the new operator of the facility must submit a notification to the EPA in accordance with the requirements of this part at least 2 days prior to the change.

4. Late Notification. An operator associated with sewage sludge generation, treatment, final reuse or disposal is not precluded from submitting a notification to the EPA in accordance with the requirements of this part after the dates provided in Parts IV.A.1., 2., or 3. (above) of this permit.

5. Owners or operators of facilities authorized by this permit shall notify the Arkansas Department of Pollution Control and Ecology (ADPC&E) that they are covered by this permit. State notification must be made within 30

days of issuance of this permit or upon completion of a new facility.

B. Contents of Notice of Intent

Notifications to the EPA shall be signed in accordance with Part VI. (Signatory Requirements) of this permit and shall include the following information:

1. The operator's name, address, telephone number, and status as Federal, State, private, public, or other entity;
2. An indication of whether the TWTDS (including the land application and disposal sites) are located on Federal Indian Reservations;
3. The permit number(s) of additional permit(s) (Federal, State, and local) authorizing activities associated with the generation, treatment, land application for beneficial reuse, surface disposal or disposal of sludge in a municipal solid waste landfill currently authorized by other permits;
4. Description of the permittee's sludge use and disposal practices.
5. Presence of Endangered Species. Based on the instructions in Addendum A, no species identified in Addendum A are in proximity to the sites where sewage sludge is generated, treated, land applied for beneficial reuse, surface disposed, or disposed in a municipal solid waste landfill.
6. National Historic Preservation Act Compliance. A yes or no response to the following statement: Applicant has obtained and is in compliance with Historic Preservation Agreement.
7. Eligibility Certification. The following certifications shall be signed in accordance with Part VI.

> "I certify under penalty of law that I have read and understand the Part IV.B. eligibility requirements for coverage under the sewage sludge general permit including those requirements relating to the protection of species identified in Addendum A."
>
> "To the best of my knowledge the sludge generation, sludge treatment processes, land application for beneficial reuse, surface disposal, and disposal in a municipal solid waste landfill covered under this permit, are not likely and will not likely, adversely affect any species identified in Addendum A of this permit, or are otherwise eligible for coverage due to previous authorization under the Endangered Species Act."
>
> "To the best of my knowledge, I further certify that such activities, do not have an effect on properties listed or eligible for listing on the National Register of Historic Places under the National Historic Preservation Act, or are otherwise eligible for coverage due to a previous agreement under the National Historic Preservation Act."
>
> "I understand that continued coverage under the sewage sludge general permit is contingent upon maintaining eligibility as provided for in Part IV.B."

C. Where to Submit

Facilities that generate, treat, land apply for beneficial reuse, surface dispose, or dispose of sludge in a municipal solid waste landfill must notify the EPA at the following address. The notification must be signed in accordance with Part VI. (Signatory Requirements) of this permit. The notification is to be submitted to the Chief of the Water Enforcement Branch (6EN-W) at the following address:

Sewage Sludge Notice of Intent
Water Enforcement Branch (6EN-W)
Region 6

U.S. Environmental Protection Agency
P.O. Box 50625
Dallas, Texas 75270

D. Additional Notification

1. The permittee shall notify the permitting authority 30 days prior to any planned alteration or addition to the permitted facility which results in a significant change in the permittee's sludge use or disposal practices, where such alteration, addition or change may justify different or additional permit conditions. The permittee shall also notify the permitting authority 30 days prior to any additional use or disposal sites not previously reported during the permit application process or not reported pursuant to an approved land application site.

2. The permittee shall notify the permitting authority 30 days prior to any planned changes in the permitted facility or activity which may result in the permittee's failure to comply with permit requirements.

3. The permittee shall promptly submit to the permitting authority any relevant facts or information where the permittee becomes aware of its failure to have previously submitted such information or to have previously submitted incorrect information in a permit application or in any report.

E. Non-Compliance Notification

1. The permittee shall report to the permitting authority all instances of its failure to comply with the conditions of this permit. Reports of the permittee's failure to comply shall be submitted with the permittee's next self-monitoring report or earlier, if requested by the permitting authority or if required by an applicable sludge use or disposal standard or permit conditions.

Part V. Permit Actions

A. This permit may be modified, revoked and reissued, or terminated for cause.

B. This permit may be modified or revoked and reissued to conform to any applicable sludge use or disposal standard, promulgated under Section 405(d) of the CWA, which is more stringent than any limitation on the affected sludge pollutant or acceptable management practices authorized in this permit, or which controls a pollutant or practice not limited in this permit.

C. This permit may be modified or revoked and reissued where there are material and substantial alterations or additions to the permitted facility or activity, including a change in the permittee's sludge use or disposal practices, and which justify different or additional permit conditions.

D. This permit may be revoked and reissued due to changes in the permitted facility or activity, planned by the permittee, which may result in the failure to comply with permit requirements.

E. The permittee may transfer this permit to a new owner or operator if the permit has been either modified or revoked and reissued to identify the new permittee and to incorporate such other requirements as may be necessary to assure compliance with the CWA.

F. The permittee, upon prior authorization of the permitting authority, may automatically transfer this permit to a new permittee if the following conditions have been met: (1) The permittee notifies the permitting authority of the proposed transfer date at least thirty (30) days in advance; (2) The notice includes a written agreement between the permittee and the proposed new permittee(s) which contains a date for transfer of permit responsibility, coverage, and liability; and (3) The permittee does not receive notification from the permitting authority that it will exercise its discretion to modify

or revoke and reissue the permit. Under this circumstance, the permit transfer is effective on the date specified in the written agreement.

G. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, does not justify the failure to comply with any permit condition.

H. The filing by the permittee of a notification of planned changes or of anticipated noncompliance does not justify the failure to comply with any permit condition.

I. Prior to the expiration date of this permit, the permittee must apply for and obtain a new permit in order to continue an activity regulated hereunder.

J. The permittee shall apply for a new permit within one hundred eighty (180) days of promulgation of an applicable standard for sludge use or disposal, or when its next permit renewal is due, whichever occurs first.

K. The permittee shall submit a new application at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director. In no case may permission be granted to submit a new application later than the expiration date of the existing permit.

Part VI. Signatory Requirements

A. Reports - All notifications of intent, notices of termination, reports, certifications or information either submitted to the Director, or that this permit requires be maintained by the permittee, shall be signed as follows:

1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: 1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or 2) the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25,000,000 (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal, or other public facility: by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes 1) the chief executive officer of the agency, or 2) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

B. Authorized Representative - All reports required by the permit and other information requested by the Director shall be signed by a person described in Section VI. above or be signed by a duly authorized representative of that person. A person is a duly authorized representative only if:

1. The authorization is made in writing by a person described above and submitted to the Director.
2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any

individual occupying a named position).

3. Changes to Authorization. If an authorization under paragraph VI.B.1. or 2. is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new notification satisfying the requirements of Part IV.B. (Contents of NOI) must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

C. Certification - Any person signing documents under this section shall make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Part VII. Termination of Coverage

A. Notice of Termination

Where all activities associated with the TWTDS including the generation, treatment, land application for beneficial reuse, surface disposal, or disposal of sludge in a municipal solid waste landfill are authorized by this permit are eliminated, the operator of the TWTDS shall notify the EPA within 60 days. The notification shall be signed in accordance with Part VI (Signatory Requirements) of this permit. The Notice of Termination shall include the following information:

1. Facility Information. Name, mailing address, and location of the TWTDS for which the notification is submitted. Describe the physical location of the site in terms of the latitude and longitude, or the section, township and range to the nearest quarter section;

2. Operator Information. The name, address, and telephone number of the operator addressed by the notification;

3. Permit Number. The permit number for the TWTDS associated with sewage sludge generation, treatment, land application, surface disposal, or disposal in a municipal solid waste landfill identified by the Notice of Termination;

4. Reason for Termination. An indication of whether the activities associated with sewage sludge have been eliminated or the operator of the TWTDS has changed; and

5. Certification. The following certification signed in accordance with Part VI. (Signatory Requirements) of this permit:

"I certify under penalty of law that the activities associated with sewage sludge from the TWTDS that are regulated by a general permit have been eliminated or that I am no longer the operator of the TWTDS. I understand that by submitting this notice of termination, that I can no longer generate, treat (change the quality of), land apply, surface dispose, or dispose of sewage sludge in a municipal solid waste landfill under this general permit. I also understand that the submittal of this notice of termination does not release an operator from liability for any violations of this permit or the Clean Water Act."

B. Addresses

All Notices of Termination are to be sent, to the following address:

Sewage Sludge Notice of Termination
Water Enforcement Branch (6EN-W)
United States Environmental Protection Agency
P.O. Box 50625
Dallas, Texas 75270

Part VIII. Monitoring

A. The permittee shall monitor the quality of sewage sludge at a frequency dependent on the amount of sewage sludge reused or disposed, as required by Part XIII, Element 1, Section 1.C., Part XIII, Element 2, Section 1.D., and Part XIII, Element 3.F., as applicable. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

B. The permittee shall report results of monitoring of sludge use or disposal practices on a Discharge Monitoring Report (DMR) as provided or specified by the permitting authority for that purpose.

C. The permittee shall maintain records of monitoring information which shall include the following: (1) Date, exact location, and time of sampling or measurements; (2) Names of individuals performing the sampling and measurements; (3) Dates the analyses were performed; (4) Names of individuals performing the analyses; (5) Analytical methods or techniques used in performing the analyses; and (6) Results of the analyses.

D. The permittee shall conduct monitoring in accordance with those methods referenced in 40 CFR Subpart 503.8.

E. If the permittee monitors any pollutant, in accordance with applicable test procedures specified in this permit, more frequently than required by the permit, then the results of this monitoring shall be reported with the data submitted in the DMR as specified by the permitting authority.

F. Any person who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under this permit shall be subject to the imposition of a fine of up to $10,000 per day for each violation, or fine and imprisonment. Upon subsequent convictions for the same violation, punishment shall be by a fine of not more than $20,000 per day for each violation, or by imprisonment for up to four years, or by both a fine and imprisonment.

G. The sludge DMRs shall be due by February 19th of each year and shall cover the previous January through December time period for those publicly owned treatment works (POTWs) with a design flow rate equal to or greater than one million gallons per day (mgd), and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. Submittal of DMR's is not required from POTWs with a design flow rate of less than 1 mgd or other TWTDS (including sludge only facilities).

Part IX. Records

A. The permittee shall retain records of all data used to complete the application for this permit for a period of at least five years, unless required by 40 CFR Part 503 to be retained for a longer period.

B. The permittee shall retain all records of monitoring information required by this permit, related to the permittee's sludge generation, treatment, use and disposal activities, for a period of at least five years from the date of the sample or measurement, unless required by 40 CFR Part 503 to be retained for a longer period.

C. The permittee shall retain copies of all reports required by this permit for a period of at least five years from the date of the report, unless required by 40 CFR Part 503 to be retained for a longer period.

D. At any time upon the request of the permitting authority, the period required for retention of records and reports may be extended.

E. All reports and information submitted to the permitting authority shall be signed and certified by the following individual, as appropriate; by a responsible corporate officer; by a general partner or the proprietor; by the principle executive office or ranking public official of a municipality, State, federal or other public agency; or by a duly authorized representative.

F. Any person who knowingly makes a false statement, representation or certification in any record or other document submitted or required to be maintained under this permit shall be subject to imposition of a fine of up to $10,000 for each violation, or imprisonment for up to two years for each violation, or both a fine and imprisonment. Upon subsequent convictions for the same offense, such persons shall be subject to the imposition of a fine of up to $20,000 per day for each violation, or imprisonment for up to four years, or both a fine and imprisonment.

Part X. Definitions

A. *Active sewage sludge unit* is a sewage sludge unit that has not closed.

B. *Agricultural land* is land on which a food crop, a feed crop, or a fiber crop is grown. This includes range land and land used as pasture.

C. *Agronomic Rate* is the whole sludge application rate (dry weight basis) designed: (1) To provide the amount of nitrogen needed by the food crop, feed crop, fiber crop, cover crop, or vegetation grown on the land; and (2) To minimize the amount of nitrogen in the sewage sludge that passes below the root zone of the crop or vegetation grown on the land to the ground water.

D. *Annual pollutant loading rate* is the maximum amount of a pollutant that can be applied to a unit area of land during a 365 day period.

E. *Annual whole sludge application rate* is the maximum amount of sewage sludge (dry weight basis) that can be applied to a unit area of land during a 365 day period.

F. *Apply sewage sludge or sewage sludge applied to the land* means land application of sewage sludge.

G. *Aquifer* is a geologic formation, group of geologic formations, or a portion of a geologic formation capable of yielding ground water to wells or springs.

H. *Base flood* is a flood that has a one percent chance of occurring in any given year (i.e., a flood with a magnitude equaled once in 100 years).

I. *Bulk sewage sludge* is sewage sludge that is not sold or given away in a bag or other container for application to the land.

J. *Contaminate an aquifer* means to introduce a substance that causes the maximum contaminant level for nitrate in 40 CFR Subpart 141.11 to be exceeded in ground water or that causes the existing concentration of nitrate in ground water to increase when the existing concentration of nitrate in the ground water exceeds the maximum contamination level for nitrate in 40 CFR Subpart 141.11.

K. *Cover* is soil or other material used to cover sewage sludge placed on an active sewage sludge unit.

L. *Cumulative pollutant loading rate* is the maximum amount of an inorganic pollutant that can be applied to an area of land.

M. *CWA* means the Clean Water Act (formerly referred to as either the Federal Water Pollution Act or the Federal Water Pollution Control Act Amendments of 1972), Public Law 92-500, as amended by Public Law 95-217, Public Law 95-576, Public Law 96-483, Public Law 97-117, and Public Law 100-

N. *Domestic sewage* is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

O. *Displacement* is the relative movement of any two sides of a fault measured in any direction.

P. *Dry weight basis* means calculated on the basis of having been dried at 105 degrees Celsius until reaching a constant mass (i.e., essentially 100

percent solids content).

Q. *EPA* means the United States Environmental Protection Agency.

R. *Fault* is a fracture or zone of fractures in any materials along which strata on one side are displaced with respect to strata on the other side.

S. *Feed crops* are crops produced primarily for consumption by animals.

T. *Fiber crops* are crops such as flax and cotton.

U. *Final cover* is the last layer of soil or other material placed on a sewage sludge unit at closure.

V. *Food crops* are crops consumed by humans. These include, but are not limited to, fruits vegetables, and tobacco.

W. *Forest* is a tract of land thick with trees and underbrush.

X. *Ground water* is water below the land surface in the saturated zone.

Y. *Holocene time* is the most recent epoch of the Quaternary period, extending from the end of the Pleistocene epoch to the present.

Z. *Industrial wastewater* is wastewater generated in a commercial or industrial process.

AA. *Land application* is the spraying or spreading of sewage sludge onto the land surface; the injection of sewage sludge below the land surface; or the incorporation of sewage sludge into the soil so that the sewage sludge can either condition the soil or fertilize crops or vegetation grown in the soil.

BB. *Leachate collection system* is a system or device installed immediately above a liner that is designed, constructed, maintained, and operated to collect and remove leachate from a sewage sludge unit.

CC. *Liner* is soil or synthetic material that has a hydraulic conductivity of $1x10^{-7}$ centimeters per second or less.

DD. *Lower explosive limit for methane gas* is the lowest percentage of methane gas in air, by volume, that propagates a flame at 25 degrees Celsius and atmospheric pressure.

EE. *Monthly average* is the arithmetic mean of all measurements taken during the month.

FF. *Municipality* means a city, town, borough, county, county, district, association, or other public body (including an intermunicipal Agency of two or more of the foregoing entities) created by or under State law; an Indian tribe or an authorized Indian tribal organization having jurisdiction over sewage sludge management; or a designated and approved management Agency under section 208 of the CWA, as amended. The definition includes a special district created under State law, such as a water district, sewer district, sanitary district, utility district, drainage district, or similar entity, or an integrated waste management facility as defined in section 201(3) of the CWA, as amended, that has one of its principal responsibilities the treatment, transport, use, or disposal of sewage sludge.

GG. *Other container* is either an open or closed receptacle. This includes, but is not limited to, a bucket, a box, a carton, and a vehicle or trailer with a load capacity of one metric ton or less.

HH. *Pasture* is land on which animals feed directly on feed crops such as legumes, grasses, grain stubble, or stover.

II. *Permitting authority* is either EPA or a State with an EPA-approved sludge management program.

JJ. *Person* is an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

KK. *Person who prepares sewage sludge* is either the person who generates sewage sludge during treatment of domestic sewage in a treatment works or the person who derives a material from sewage sludge.

LL. *Place sewage sludge or sewage sludge placed* means disposal of sewage sludge on a surface disposal site.

MM. *Pollutant* is an organic substance, an inorganic substance, a combination of organic and inorganic substances, or a pathogenic organism that, after discharge and upon exposure, ingestion, inhalation, or

assimilation into an organism either directly from the environment or indirectly by ingestion through the food chain, could, on the basis of information available to the Administrator of EPA, cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunction in reproduction), or physical deformations in either organisms or offspring of the organisms.

NN. *Pollutant limit* is a numerical value that describes the amount of a pollutant allowed per unit amount of sewage sludge (e.g., milligrams per kilogram of total solids); the amount of a pollutant that can be applied to a unit area of land (e.g., kilograms per hectare); or the volume of a material that can be applied to a unit area of land (e.g., gallons per acre).

OO. *Public contact site* is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.

PP. *Qualified ground water scientist* is an individual with a baccalaureate or post-graduate degree in the natural sciences or engineering who has sufficient training and experience in ground water hydrology and related fields, as may be demonstrated by State registration, professional certification, or completion of accredited university programs, to make sound professional judgements regarding ground water monitoring, pollutant fate and transport, and corrective action.

QQ. *Range land* is open land with indigenous vegetation.

RR. *Reclamation site* is drastically disturbed land that is reclaimed using sewage sludge. This includes, but is not limited to, strip mines and construction sites.

SS. *Runoff* is rainwater, leachate, or other liquid that drains overland on any part of a land surface and runs off of the land surface.

TT. *Seismic impact zone* is an area that has a 10 percent or greater probability that the horizontal ground level acceleration of the rock in the area exceeds 0.10 gravity once in 250 years.

UU. *Sewage sludge* is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

VV. *Sewage sludge unit* is land on which only sewage sludge is placed for final disposal. This does not include land on which sewage sludge is either stored or treated. Land does not include waters of the United States, as defined in 40 CFR Subpart 122.2.

WW. *Sewage sludge unit boundary* is the outermost perimeter of an active sewage sludge unit.

XX. *Store or storage of sewage sludge* is the placement of sewage sludge on land on which the sewage sludge remains for two years or less. This does not include the placement of sewage sludge on land for treatment.

YY. *Surface disposal site* is an area of land that contains one or more active sewage sludge units.

ZZ. *Treat or treatment of sewage sludge* is the preparation of sewage sludge for final use or disposal. This includes, but is not limited to, thickening, stabilization, and dewatering of sewage sludge. This does not include storage of sewage sludge.

aa. *Treatment works* (TWTDS) is either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature. EPA may designate any person a TWTDS where the designation is necessary to ensure compliance with the 40 CFR Part 503 regulations.

bb. *Unstable area* is land subject to natural or human-induced forces that may damage the structural components of an active sewage sludge unit. This includes, but is not limited to, land on which the soils are subject to mass movement.

cc. *Wetlands* means those areas that are inundated or saturated by surface water or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

Part XI. Outline of Permit

Element 1. Land Application

Section I. Requirements Applying to All Sewage Sludge Land Application
- A. General Requirements
- B. Testing Requirements
- C. Monitoring Requirements

Section II. Requirements Specific to Bulk Sewage Sludge for Application to the Land Meeting Class A or B Pathogen Reduction and the Cumulative Loading Rates in Table 2, or Class B Pathogen Reduction and the Pollutant Concentrations in Table 3.
- A. Pollutant Limits
- B. Pathogen Control
- C. Management Practices
- D. Notification Requirements
- E. Recordkeeping Requirements
- F. Reporting Requirements

Section III. Requirements Specific to Bulk Sewage Sludge Meeting Pollutant Concentrations in Table 3 and Class A Pathogen Reduction Requirements.
- A. Pollutant Limits
- B. Pathogen Control
- C. Management Practices
- D. Notification Requirements
- E. Recordkeeping Requirements
- F. Reporting Requirements

Section IV. Requirements Specific to Sludge Sold or Given Away in a Bag or Other Container for Application to the Land that does not Meet the Pollutant Concentrations in Table 3.
- A. Pollutant Limits
- B. Pathogen Control
- C. Management Practices
- D. Notification Requirements
- E. Recordkeeping Requirements
- F. Reporting Requirements

Element 2. Surface Disposal

Section I. Requirements Applying to All Sewage Sludge Surface Disposal
- A. General Requirements
- B. Management Practices
- C. Testing Requirements
- D. Monitoring Requirements

Section II. Requirements Specific to Surface Disposal Sites Without a Liner and Leachate Collection System
- A. Pollutant Limits
- B. Management Practices
- C. Notification Requirements
- D. Recordkeeping Requirements
- E. Reporting Requirements

Section III. Requirements Specific to Surface Disposal Sites With a Liner and Leachate Collection System
- A. Pollutant Limits
- B. Management Practices

C. Notification Requirements
D. Recordkeeping Requirements
E. Reporting Requirements

Element 3. Municipal Solid Waste Landfill Disposal
Section I. Requirements Applying to All Municipal Solid Waste Landfill Disposal Activities

Part XII. Instructions to Permittees

Select only those Elements and Sections which apply to your sludge reuse or disposal practice.

If your facility utilizes more than one type of disposal or reuse method (for example, Element I and Element II apply) or the quality of your sludge varies (for example, Section II and Section III of Element I apply) use a separate Discharge Monitoring Report (DMR) for each Section that is applicable.

The sludge DMRs shall be due by February 19th of each year and shall cover the previous January through December time period for those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one million gallons per day (mgd), and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. Submittal of DMR's is not required from POTWs with a design flow rate of less than 1 mgd or other TWTDS (including sludge only facilities).

The sludge conditions do not apply to wastewater treatment lagoons where sludge is not wasted for final reuse/disposal. If the sludge is not removed, the permittee shall indicate on the DMR "No Discharge".

ELEMENT 1 - LAND APPLICATION

SECTION I:	Requirements Applying to All Sewage Sludge Land Application
SECTION II:	Requirements Specific to Bulk Sewage Sludge for Application to the Land Meeting Class A or B Pathogen Reduction and the Cumulative Loading Rates in Table 2, or Class B Pathogen Reduction and the Pollutant Concentrations in Table 3
SECTION III:	Requirements Specific to Bulk Sewage Sludge Meeting Pollutant Concentrations in Table 3 and Class A Pathogen Reduction Requirements
SECTION IV:	Requirements Specific to Sludge Sold or Given Away in a Bag or Other Container for Application to the Land that does not Meet the Pollutant Concentrations in Table 3

ELEMENT 2 - SURFACE DISPOSAL

SECTION I:	Requirements Applying to All Sewage Sludge Surface Disposal
SECTION II:	Requirements Specific to Surface Disposal Sites Without a Liner and Leachate Collection System
SECTION III:	Requirements Specific to Surface Disposal Sites With a Liner and Leachate Collection System

ELEMENT 3 - MUNICIPAL SOLID WASTE LANDFILL DISPOSAL

SECTION I: Requirements Applying to All Municipal Solid Waste Landfill Disposal Activities

Part XIII. Body of Permit

ELEMENT 1 - LAND APPLICATION

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE LAND APPLICATION

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with Section 405 of the Clean Water Act and all other applicable Federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.

2. If requirements for sludge management practices or pollutant criteria become more stringent than the sludge pollutant limits or acceptable management practices in this permit, or control a pollutant not listed in this permit, this permit may be modified or revoked and reissued to conform to the requirements promulgated at Section 405(d)(2) of the Clean Water Act (CWA).

3. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person for land application use or to the owner or lease holder of the land, the permit holder shall provide necessary information to the parties who receive the sludge to assure compliance with these regulations.

4. The permittee shall give prior notice to EPA (Chief, NPDES Permits Branch, Water Quality Protection Division, Mail Code 6WQ-P, EPA Region 6, 1445 Ross Avenue, Dallas, Texas 75202) of any planned changes in the sewage sludge disposal practice, in accordance with 40 CFR Subpart 122.41(l)(1)(iii). These changes may justify the application of permit conditions that are different from or absent in the existing permit. Change in the sludge use or disposal practice may be cause for revoking and reissuing the permit in accordance with 40 CFR Subpart 122.62(a)(1).

5. The permittee shall complete the following evaluation of the sewage sludge generated by the facility. The permittee shall retain this information on site and it shall be made available for inspection purposes within three years of the effective date of the permit.

   a. An annual quantitative tabulation of the ultimate disposition of all sewage sludge (including, but not limited to, the amount beneficially reused, landfilled, surface disposed, and incinerated).

   b. An assessment of technological processes and an economic analysis evaluating the potential for beneficial reuse of all sewage sludge not currently beneficially reused, including a listing of any steps which would be required to achieve the sludge quality necessary to beneficially reuse the sludge.

   c. A description of, including the expected results and the anticipated timing for, all projects in process, in planning and/or being considered which are directed towards additional beneficial reuse of sewage sludge.

d. A listing of the specific steps (controls/changes) which would be necessary to achieve and sustain the quality of the sludge so that the pollutant concentrations in the sludge fall below the pollutant concentration criteria listed in Part XIII, Element I, Section III, Table 3 of the permit.

e. A listing of, and the anticipated timing for, all projects in process, in planning, and/or being considered which are directed towards meeting the sludge quality referenced in (d) above.

f. In accordance with 40 CFR Subpart 503.13(a)(3), if bulk sewage sludge is applied to a lawn or home garden, the concentration of each pollutant in the sewage sludge shall not exceed the concentration of pollutants in Table 3, Element I, Section III.

B. Testing Requirements

1. Sewage sludge shall be tested once during the life of the permit within one year from the effective date of the permit in accordance with the method specified at 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure (TCLP)) or other approved methods on those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one million gallons per day (mgd), and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. This provision does not apply to those POTWs with a design flow of less than 1 mgd or other TWTDS (sludge only facilities). Sludge shall be tested after final treatment prior to leaving the POTW site. Sewage sludge determined to be a hazardous waste in accordance with 40 CFR Part 261, shall be handled according to RCRA standards for the disposal of hazardous waste in accordance with 40 CFR Part 262. The disposal of sewage sludge determined to be a hazardous waste, in other than a certified hazardous waste disposal facility shall be prohibited. The Information Management Section, telephone no. (214) 665-6750, and the appropriate state agency shall be notified of test failure within 24 hours. A written report shall be provided to this office within 7 days after failing the TCLP. The report will contain test results, certification that unauthorized disposal has not occurred and a summary of alternative disposal plans that comply with RCRA standards for the disposal of hazardous waste. The report shall be addressed to: Director, Multimedia Planning and Permitting Division, EPA Region 6, Mail Code 6PD, 1445 Ross Avenue, Dallas, Texas 75202. A copy of this report shall be sent to the Chief, Water Enforcement Branch, Compliance Assurance and Enforcement Division, Mail Code 6EN-W, at the same street address.

2. Sewage sludge shall not be applied to the land if the concentration of any of the pollutants exceed the pollutant concentration criteria in Table 1. Testing for PCBs is only required by those POTWs with a design flow rate equal to or greater than one mgd, and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice.

   The frequency of testing for pollutants in Table 1 is found in

TABLE 1

Pollutant	Ceiling Concentrations (milligrams per kilogram)*
Arsenic	**75**
Cadmium	**85**
Copper	**4300**
Lead	**840**
Mercury	**57**
Molybdenum	**75**
Nickel	**420**
Selenium	**100**
Zinc	**7500**

* Dry weight basis

3. Pathogen Control

All sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by either the Class A or Class B pathogen requirements. Sewage sludge that is applied to a lawn or home garden shall be treated by the Class A pathogen requirements. Sewage sludge that is sold or given away in a bag shall be treated by Class A pathogen requirements.

a. Six alternatives are available to demonstrate compliance with Class A sewage sludge. All 6 options require either the density of fecal coliform in the sewage sludge be less than 1000 Most Probable Number (MPN) per gram of total solids (dry weight basis), or the density of Salmonella sp. bacteria in the sewage sludge be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land. Below are the additional requirements necessary to meet the definition of a Class A sludge. For any Class A sludge, when vector attraction reduction Alternatives 1-6 are used, pathogen reduction must be met either prior to or at the same time.

Alternative 1 - The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time. See 40 CFR Subpart 503.32(a)(3)(ii) for specific information. This alternative is not applicable to composting

Alternative 2 - The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours. pH shall be defined as the logarithm of the reciprocal of the hydrogen ion concentration measured at 25°C or measured at another temperature and then converted to an equivalent value at 25° C.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of

the sewage sludge is above 12.

At the end of the 72 hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

Alternative 3 - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 40 CFR Subpart 503.32(a)(5)(ii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 40 CFR Subpart 503.32(a)(5)(iii) for specific information.

Alternative 4 - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sludge is prepared for sale or given away in a bag or other container for application to the land.

The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land.

Alternative 5 - Sewage sludge shall be treated by one of the Processes to Further Reduce Pathogens (PFRP) described in 40 CFR Part 503 Appendix B. PFRPs include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 - Sewage sludge shall be treated by a process that is equivalent to a Process to Further Reduce Pathogens, if individually approved by the Pathogen Equivalency Committee representing the EPA.

b. Three alternatives are available to demonstrate compliance with Class B sewage sludge.

Alternative 1 - (i) Seven representative samples of the sewage sludge that is used shall be collected for one monitoring episode at the time the sewage sludge is used or disposed.

(ii) The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 MPN per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge shall be treated in one of the Processes to significantly Reduce Pathogens (PSRP) described in 40 CFR Part 503 Appendix B.

Alternative 3 - Sewage sludge shall be treated in a process that is equivalent to a PSRP, if individually

approved by the Pathogen Equivalency Committee representing the EPA.

In addition, the following site restrictions must be met if Class B sludge is land applied.

i. Food crops with harvested parts that touch the sewage sludge/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of sewage sludge.

ii. Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after application of sewage sludge when the sewage sludge remains on the land surface for 4 months or longer prior to incorporation into the soil.

iii. Food crops with harvested parts below the surface of the land shall not be harvested for 38 months after application of sewage sludge when the sewage sludge remains on the land surface for less than 4 months prior to incorporation into the soil.

iv. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of sewage sludge.

v. Animals shall not be grazed on the land for 30 days after application of sewage sludge.

vi. Turf grown on land where sewage sludge is applied shall not be harvested for 1 year after application of the sewage sludge when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority.

vii. Public access to land with a high potential for public exposure shall be restricted for 1 year after application of sewage sludge.

viii. Public access to land with a low potential for public exposure shall be restricted for 30 days after application of sewage sludge.

4. Vector Attraction Reduction Requirements

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, or a reclamation site shall be treated by one of the following alternatives 1 through 10 for Vector Attraction Reduction. All bagged sewage sludge shall be treated by one of Alternatives 1-8 only. If bulk sewage sludge is applied to a home garden or lawn, or bagged sewage sludge is applied to the land, only alternative 1 through alternative 8 shall be used.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius.

Volatile solids must be reduced by less than 17 percent to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is used. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or anaerobic treatment process.

Alternative 9 -

(i) Sewage sludge shall be injected below the surface of the land.

(ii) No significant amount of the sewage sludge shall

be present on the land surface within one hour after the sewage sludge is injected.

(iii) When sewage sludge that is injected below the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10 -

(i) Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

(ii) When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

C. Monitoring Requirements

Toxicity Characteristic Leaching Procedure (TCLP) Test - Once/Permit Life, performed within one year from the effective date of the permit (For publicly owned treatment works (POTWs) with a design flow of 1.0 mgd or greater)

PCBs - Once/Year

All other pollutants shall be monitored at the frequency shown below:

Amount of Sewage Sludge* (metric tons/365 day period)	**Frequency**
0 ≤ Sludge ≤ 290	**Once/Year**
290 ≤ Sludge ≤ 1,500	**Once/Quarter**
1,500 ≤ Sludge ≤ 15,000	**Once/Two Months**
15,000 ≤ Sludge	**Once/Month**

* Either the amount of bulk sewage sludge applied to the land or the amount of sewage sludge received by a person who prepares sewage sludge that is sold or given away in a bag or other container for application to the land (dry weight basis).

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 40 CFR Subpart 503.8(b).

SECTION II. REQUIREMENTS SPECIFIC TO BULK SEWAGE SLUDGE FOR APPLICATION TO THE LAND MEETING CLASS A or B PATHOGEN REDUCTION AND THE CUMULATIVE LOADING RATES IN TABLE 2, OR CLASS B PATHOGEN REDUCTION AND THE POLLUTANT CONCENTRATIONS IN TABLE 3

For those permittees meeting Class A or B pathogen reduction requirements and that meet the cumulative loading rates in Table 2 below, or the Class B pathogen reduction requirements and contain concentrations of pollutants below those listed in Table 3 found in Element I, Section III, the following conditions apply:

A. Pollutant Limits

Table 2

Pollutant	Cumulative Pollutant Loading Rate (kilograms per hectare)
Arsenic	**41**
Cadmium	**39**
Copper	**1500**
Lead	**300**
Mercury	**17**
Molybdenum	**Monitor**
Nickel	**420**
Selenium	**100**
Zinc	**2800**

B. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, or lawn or home garden shall be treated by either Class A or Class B pathogen reduction requirements as defined above in Element 1, Section I.B.3.

C. Management Practices

1. Bulk sewage sludge shall not be applied to agricultural land, forest, a public contact site, or a reclamation site that is flooded, frozen, or snow-covered so that the bulk sewage sludge enters a wetland or other waters of the U.S., as defined in 40 CFR Subpart 122.2, except as provided in a permit issued pursuant to section 402 or 404 of the CWA.

2. Bulk sewage sludge shall not be applied within 10 meters of a water of the U.S.

3. Bulk sewage sludge shall be applied at or below the agronomic rate (phosphorous and nitrogen) in accordance with recommendations from the following references. Nitrogen shall be considered the limiting pollutant in unimpaired watersheds. Phosphorous shall be considered the limiting pollutant in impaired watersheds.

   a. STANDARDS 1992, Standards, Engineering Practices and Data, 39th Edition (1992) American Society of Agricultural Engineers, 2950 Niles Road, St. Joseph, MI 49085-9659;

   b. National Engineering Handbook Part 651, Agricultural Waste Management Field Handbook (1992), P.O. Box 2890, Washington, D.C. 20013;

   c. Recommendations of local extension services or Soil Conservation Services; and

   d. Recommendations of a major University's Agronomic

Department.

4. An information sheet shall be provided to the person who receives bulk sewage sludge sold or given away. The information sheet shall contain the following information:

   a. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land;

   b. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet; and

   c. The annual whole sludge application rate for the sewage sludge that does not cause any of the cumulative pollutant loading rates in Table 2 above to be exceeded, unless the pollutant concentrations in Table 3 found in Element I, Section III below are met.

D. Notification requirements (Other than those listed in Part IV of the permit)

1. If bulk sewage sludge is applied to land in a State other than the State in which the sludge is prepared, written notice shall be provided prior to the initial land application to the permitting authority for the State in which the bulk sewage sludge is proposed to be applied. The notice shall include:

   a. The location, by either street address or latitude and longitude, of each land application site;
   b. The approximate time period bulk sewage sludge will be applied to the site;
   c. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who prepares the bulk sewage sludge; and
   d. The name, address, telephone number, and National Pollutant Discharge Elimination System permit number (if appropriate) for the person who will apply the bulk sewage sludge.

2. The permittee shall give 60 days prior notice to the Director of any change planned in the sewage sludge practice. Any change shall include any planned physical alterations or additions to the permitted treatment works, changes in the permittee's sludge use or disposal practice, and also alterations, additions, or deletions of disposal sites. These changes may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional disposal sites not reported during the permit application process or absent in the existing permit. Change in the sludge use or disposal practice may be cause for revoke and reissue of the permit in accordance with 40 CFR Subpart 122.62(b).

3. The permittee shall provide the location of all existing sludge disposal/use sites to the State Historical Commission within 90 days of the effective date of this permit. In addition, the permittee shall provide the location of any

new disposal/use site to the State Historical Commission prior to use of the site. The permittee shall within 30 days after notification by the State Historical Commission that a specific sludge disposal/use area will adversely affect a National Historic Site, cease use of such area.

E. Recordkeeping Requirements - The sludge documents will be retained on site at the same location as other NPDES records.

The person who prepares bulk sewage sludge or a sewage sludge material shall develop the following information and shall retain the information for five years. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for recordkeeping found in 40 CFR Subpart 503.17 for persons who land apply.

1. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 3 found in Element I, Section III and the applicable pollutant concentration criteria (mg/Kg), or the applicable cumulative pollutant loading rate and the applicable cumulative pollutant loading rate limit (kg/ha) listed in Table 2 above;
2. A description of how the pathogen reduction requirements are met (including site restrictions for Class B sludge, if applicable);
3. A description of how the vector attraction reduction requirements are met;
4. A description of how the management practices listed above in Section II.3 are being met;
5. The recommended agronomic loading rate from the references listed in Section II.3.c. above, as well as the actual agronomic loading rate shall be retained;
6. A description of how the site restrictions in 40 CFR Subpart 503.32(b)(5) are met for each site on which Class B bulk sewage sludge is applied;
7. The following certification statement:
"I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in 40 CFR Subpart 503.14 have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices have been met. I am aware that there are significant penalties for false certification including fine and imprisonment.";
8. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 40 CFR Subparts 503.17(a)(4)(I)(B) or 503.17(a)(5)(I)(B) as applicable to the permittees sludge treatment activities;
9. The permittee shall maintain information that describes future geographical areas where sludge may be land applied;
10. The permittee shall maintain information identifying site selection criteria regarding land application sites not identified at the time of permit application submission; and
11. The permittee shall maintain information regarding how future land application sites will be managed.

The person who prepares bulk sewage sludge or a sewage sludge material

shall develop the following information and shall retain the information indefinitely. If the permittee supplies the sludge to another person who land applies the sludge, the permittee shall notify the land applier of the requirements for recordkeeping found in 40 CFR Subpart 503.17 for persons who land apply.

1. The location, by either street address or latitude and longitude, of each site on which sludge is applied;
2. The number of hectares in each site on which bulk sludge is applied;
3. The date and time sludge is applied to each site;
4. The cumulative amount of each pollutant in kilograms/hectare listed in Table 2 applied to each site;
5. The total amount of sludge applied to each site in metric tons;
6. The following certification statement:
   "I certify, under penalty of law, that the information that will be used to determine compliance with the requirements to obtain information in 40 CFR Subpart 503.12(e)(2) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the requirements to obtain information have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."; and
7. A description of how the requirements to obtain information in 40 CFR Subpart 503.12(e)(2) are met.

F. Reporting Requirements - Reporting procedures are required to be conducted by only those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one mgd, and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. All remaining TWTDS, other than those defined above, are not required to report. If applicable, the permittee shall report annually on the DMR the following information:

1. Pollutant Table (2 or 3) appropriate for permittee's land application practices;
2. The frequency of monitoring listed in Element 1, Section I.C. which applies to the permittee;
3. Toxicity Characteristic Leaching Procedure (TCLP) results, if applicable (Pass/Fail);
4. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) as well as the applicable pollutant concentration criteria (mg/Kg) listed in Table 3 found in Element 1, Section III, or the applicable pollutant loading rate limit (kg/ha) listed in Table 2 above if it exceeds 90% of the limit;
5. Level of pathogen reduction achieved (Class A or Class B);
6. Alternative used as listed in Section I.B.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met. If Class B sludge, include information on how site restrictions were met in the DMR comment section or attach a separate sheet to the DMR;

7. Vector attraction reduction alternative used as listed in Section I.B.4;
8. Annual sludge production in dry metric tons/year;
9. Amount of sludge land applied in dry metric tons/year;
10. Amount of sludge transported interstate in dry metric tons/year;

11. The certification statement listed in 40 CFR Subparts 503.17(a)(4)(i)(B) or 503.17(a)(5)(i)(B) whichever applies to the permittees sludge treatment activities shall be attached to the DMR;
12. When the amount of any pollutant applied to the land exceeds 90% of the cumulative pollutant loading rate for that pollutant, as described in Table 2, the permittee shall report the following information as an attachment to the DMR:

    a. The location, by either street address or latitude and longitude;
    b. The number of hectares in each site on which bulk sewage sludge is applied;
    c. The date and time bulk sewage sludge is applied to each site;
    d. The cumulative amount of each pollutant (i.e., kilograms/hectare) listed in Table 2 in the bulk sewage sludge applied to each site;
    e. The amount of sewage sludge (i.e., metric tons) applied to each site;
    f. The following certification statement:

    "I certify, under penalty of law, that the information that will be used to determine compliance with the requirements to obtain information in 40 CFR Subpart 503.12(e)(2) have been met for each site on which bulk sewage sludge is applied. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the requirements to obtain information have been met. I am aware that there are significant penalties for false certification including fine and imprisonment."; and

    g. A description of how the requirements to obtain information in 40 CFR Subpart 503.12(e)(2) are met;

SECTION III. REQUIREMENTS SPECIFIC TO BULK OR BAGGED SEWAGE SLUDGE MEETING POLLUTANT CONCENTRATIONS IN TABLE 3 AND CLASS A PATHOGEN REDUCTION REQUIREMENTS

For those permittees with sludge that contains concentrations of pollutants below those pollutant limits listed in Table 3 for bulk or bagged (containerized) sewage sludge, meets the Class A pathogen reduction requirements, and meets vector attraction reduction alternatives 1-8 only, the following conditions apply. (Note: All bagged sewage sludge must be treated by Class A pathogen reduction requirements and meet vector attraction reduction Alternatives 1 - 8 only.)

A. Pollutant limits - The concentration of the pollutants in the municipal sewage sludge is at or below the values listed.

Table 3

Pollutant	Pollutant Concentrations (milligrams per kilogram*)
Arsenic	**41**
Cadmium	**39**
Copper	**1500**
Lead	**300**
Mercury	**17**
Molybdenum	**Monitor**
Nickel	**420**
Selenium	**100**
Zinc	**2800**

* Dry weight basis

B. Pathogen Control

All bulk sewage sludge that is applied to agricultural land, forest, a public contact site, a reclamation site, or lawn or home garden shall be treated by the Class A pathogen reduction requirements as defined above in Element I, Section I.B.3. All bagged sewage sludge must be treated by Class A pathogen reduction requirements.

C. Management Practices - None. However, it is strongly recommended that the sewage sludge be land applied at an agronomic rate (nitrogen and phosphorous) in accordance with recommendations from the following references. Nitrogen shall be considered the limiting pollutant in unimpaired watershed areas. Phosphorous shall be considered the limiting pollutant in impaired watershed areas.

D. Notification Requirements - None (Other than those listed in Part IV of the permit).

E. Recordkeeping Requirements - The permittee shall develop the following information and shall retain the information for five years. The sludge documents will be retained on site at the same location as other NPDES records.

1. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 3 and the applicable pollutant concentration criteria listed in Table 3;
2. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment. See 40 CFR Subpart 503.17(a)(1)(ii);
3. A description of how the Class A pathogen reduction requirements are met; and
4. A description of how the vector attraction reduction requirements are met;

F. Reporting Requirements - Reporting procedures are required to be

conducted by only those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. All remaining TWTDS, other than those defined above, are not required to report. If applicable, the permittee shall report annually on the DMR the following information:

1. Pollutant Table 3 appropriate for permittee's land application practices;
2. The frequency of monitoring listed in Element 1, Section I.C. which applies to the permittee;
3. Toxicity Characteristic Leaching Procedure (TCLP) results, if applicable (Pass/Fail);
4. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 1 (defined as a monthly average) found in Element 1, Section I. In addition, the applicable pollutant concentration criteria listed in Table 3 should be included on the DMR;
5. Pathogen reduction Alternative used for Class A bagged or bulk sludge as listed in Section I.B.3.a;
6. Vector attraction reduction Alternative used, (Alternatives 1 - 8 only) as listed in Section I.B.4;
7. Annual sludge production in dry metric tons/year;
8. Amount of sludge land applied in dry metric tons/year;
9. Amount of sludge transported interstate in dry metric tons/year; and
10. The certification statement listed in 40 CFR Subparts 503.17(a)(1)(ii) or 503.17(a)(3)(I)(B), whichever applies to the permittees sludge treatment activities, shall be attached to the DMR;

SECTION IV. REQUIREMENTS SPECIFIC TO SLUDGE SOLD OR GIVEN AWAY IN A BAG OR OTHER CONTAINER FOR APPLICATION TO THE LAND THAT DOES NOT MEET THE MINIMUM POLLUTANT CONCENTRATIONS IN TABLE 3

A. Pollutant Limits - The product of the concentration of each pollutant in the sewage sludge and the annual whole sludge application rate (AWSAR) for the sewage sludge shall not cause the annual pollutant loading rate (APLA) in Table 4 to be exceeded. The procedures used to determine the AWSAR are presented in Appendix A to 40 CFR Part 503.

Table 4

Pollutant	Annual Pollutant Loading Rate (kg per hectare/365 day period)
Arsenic	**2.0**
Cadmium	**1.9**
Copper	**75**
Lead	**15**
Mercury	**0.85**
Molybdenum	**Monitor**

Nickel	**21**
Selenium	**5.0**
Zinc	**140**

B. Pathogen Control

All sewage sludge that is sold or given away in a bag or other container for application to the land shall be treated by the Class A pathogen requirements as defined in Section I.B.3.a. All sewage sludge that is sold or given away in a bag or other container for application to the land shall meet vector attraction reduction Alternatives 1 - 8 only.

C. Management Practices

Either a label shall be affixed to the bag or other container in which sewage sludge that is sold or given away for application to the land, or an information sheet shall be provided to the person who receives sewage sludge sold or given away in an other container for application to the land. The label or information sheet shall contain the following information:

1. The name and address of the person who prepared the sewage sludge that is sold or given away in a bag or other container for application to the land;
2. A statement that application of the sewage sludge to the land is prohibited except in accordance with the instructions on the label or information sheet; and
3. The annual whole sludge application rate for the sewage sludge that will not cause any of the annual pollutant loading rates in Table 4 above to be exceeded.

D. Notification Requirements - None, (other than those listed in Part IV of the permit).

E. Recordkeeping Requirements - The sludge documents will be retained on site at the same location as other NPDES records.

The person who prepares sewage sludge or a sewage sludge material shall develop the following information and shall retain the information for five years.

1. The concentration in the sludge of each pollutant listed above is found in Element I, Section I, Table 1;

2. The following certification statement found in 40 CFR Subpart 503.17(a)(6)(iii):

> "I certify, under penalty of law, that the information that will be used to determine compliance with the management practices in 40 CFR Subpart 503.14(e), the Class A pathogen requirement in 40 CFR Subpart 503.32(a), and the vector attraction reduction requirement in (insert vector attraction reduction option) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management

practices, pathogen requirements, and vector attraction reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment";

3. A description of how the Class A pathogen reduction requirements are met;

4. A description of how the vector attraction reduction requirements are met; and
5. The annual whole sludge application rate for the sewage sludge that does not cause the annual pollutant loading rates in Table 4 to be exceeded. See Appendix A to 40 CFR Part 503 - Procedure to Determine the Annual Whole Sludge Application Rate for a Sewage Sludge.

F. Reporting Requirements - Reporting procedures are required to be conducted by only those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one mgd, and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. All remaining TWTDS, other than those defined above, are <u>not</u> required to report. If applicable, the permittee shall report annually on the DMR the following information:

1. List <u>Pollutant Table 4</u> appropriate for permittee's land application practices;
2. The frequency of monitoring listed in Element 1, Section I.C. which applies to the permittee;
3. Toxicity Characteristic Leaching Procedure (TCLP) results, if applicable (Pass/Fail);
4. The concentration (mg/Kg) in the sludge of each pollutant listed above in Table 1 (defined as a monthly average) found in Element 1, Section I;
5. Class A pathogen reduction Alternative used as listed in Section I.B.3.a. Alternatives describe how the pathogen reduction requirements are met;
6. Vector attraction reduction Alternative used as listed in Section I.B.4;
7. Annual sludge production in dry metric tons/year;
8. Amount of sludge land applied in dry metric tons/year;
9. Amount of sludge transported interstate in dry metric tons/year; and
10. The following certification statement found in 40 CFR Subpart 503.17(a)(6)(iii) shall be attached to the DMR.

"I certify, under penalty of law, that the information that will be used to determine compliance with the management practice in 40 CFR Subpart 503.14(e), the Class A pathogen requirement in 40 CFR Subpart 503.32(a), and the vector attraction reduction requirement (insert appropriate option) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel gather and evaluate the information used to determine that the management practice, pathogen requirements, and vector attraction reduction

requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

ELEMENT 2- SURFACE DISPOSAL

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE SURFACE DISPOSAL

A. General Requirements

1. The permittee shall handle and dispose of sewage sludge in accordance with section 405 of the Clean Water Act and all other applicable Federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present in the sludge.

2. If requirements for sludge management practices or pollutant criteria become more stringent than the sludge pollutant limits or acceptable management practices in this permit, or control a pollutant not listed in this permit, this permit may be modified or revoked and reissued to conform to the requirements promulgated at section 405(d)(2) of the Clean Water Act.

3. In all cases, if the person (permit holder) who prepares the sewage sludge supplies the sewage sludge to another person (owner or operator of a sewage sludge unit) for disposal in a surface disposal site, the permit holder shall provide all necessary information to the parties who receive the sludge to assure compliance with these regulations.

4. The permittee shall give prior notice to EPA (Chief, Permits Branch, Water Quality Management Division, Mail Code 6WQ-P, EPA Region 6, 1445 Ross Avenue, Dallas, Texas 75202) of any planned changes in the sewage sludge disposal practice, in accordance with 40 CFR Subpart 122.41(l)(1)(iii). These changes may justify the application of permit conditions that are different from or absent in the existing permit. Change in the sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR Subpart 122.62(a)(1).

5. The permittee shall complete the following evaluation of the sewage sludge generated by the facility. The permittee shall retain this information on site and it shall be made available for inspection purposes within three years of the effective date of the permit.

   a. An annual quantitative tabulation of the ultimate disposition of all sewage sludge (including, but not limited to, the amount beneficially reused, landfilled, surface disposed, and incinerated).

   b. An assessment of technological processes and an economic analysis evaluating the potential for beneficial reuse of all sewage sludge not currently beneficially reused, including a listing of any steps which would be required to achieve the sludge quality necessary to beneficially reuse the sludge.

   c. A description of, including the expected results and the anticipated timing for, all projects in process, in planning and/or being considered which are directed towards additional beneficial reuse of sewage sludge.

d. A listing of the specific steps (controls/changes) which would be necessary to achieve and sustain the quality of the sludge so that the pollutant concentrations in the sludge fall below the pollutant concentration criteria listed in Part IV, Element I, Section III, Table 3 of the permit.

e. A listing of, and the anticipated timing for, all projects in process, in planning, and/or being considered which are directed towards meeting the sludge quality referenced in (d) above.

6. The permittee or owner/operator shall submit a written closure and post closure plan to the permitting authority 180 days prior to the closure date. The plan shall include the following information:

(a) A discussion of how the leachate collection system will be operated and maintained for three years after the surface disposal site closes if it has a liner and leachate collection system;

(b) A description of the system used to monitor continuously for methane gas in the air in any structures within the surface disposal site. The methane gas concentration shall not exceed 25% of the lower explosive limit for methane gas for three years after the sewage sludge unit closes. A description of the system used to monitor for methane gas in the air at the property line of the site shall be included. The methane gas concentration at the surface disposal site property line shall not exceed the lower explosive limit for methane gas for three years after the sewage sludge unit closes; and

(c) A discussion of how public access to the surface disposal site will be restricted for three years after it closes.

B. Management Practices

1. An active sewage sludge unit located within 60 meters of a fault that has displacement in Holocene time shall close by March 22, 1994.

2. An active sewage sludge unit located in an unstable area shall close by March 22, 1994.

3. An active sewage sludge unit located in a wetland, except as provided in a permit issued pursuant to section 402 of the CWA, shall close by March 22, 1994.

4. Surface disposal shall not restrict the flow of the 100 year base flood.

5. The run-off collection system for an active sewage sludge unit shall have the capacity to handle run-off from a 25-year, 24-hour storm event. The run-off from an active sewage sludge unit shall be collected and shall be disposed in accordance with NPDES permit requirements and any other applicable requirements.

6. A food crop, feed crop, or a fiber crop shall not be grown on a surface disposal site.

7. Animals shall not be grazed on a surface disposal site.

8. Public access shall be restricted on the active surface disposal

site and for three years after the site closes.

9. Placement of sewage sludge shall not contaminate an aquifer. This shall be demonstrated through one of the following:

   (a) Results of a ground-water monitoring program developed by a qualified ground-water scientist; or
   (b) A certification by a qualified ground-water scientist may be used to demonstrate that sewage sludge placed on an active sewage sludge unit does not contaminate an aquifer.

10. When a cover is placed on an active surface disposal site, the concentration of methane gas in air in any structure within the surface disposal site shall not exceed 25 percent of the lower explosive limit for methane gas during the period that the sewage sludge unit is active. The concentration of methane gas in air at the property line of the surface disposal site shall not exceed the lower explosive limit for methane gas during the period that the sewage sludge unit is active. Monitoring shall be continuous.

C. Testing Requirements

1. Sewage sludge shall be tested once during the life of the permit within one year from the effective date of the permit in accordance with the method specified at 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure (TCLP)) or other approved methods on those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. Sludge shall be tested after final treatment prior to leaving the POTW site. Sewage sludge determined to be a hazardous waste in accordance with 40 CFR Part 261, shall be handled according to RCRA standards for the disposal of hazardous waste in accordance with 40 CFR Part 262. The disposal of sewage sludge determined to be a hazardous waste, in other than a certified hazardous waste disposal facility shall be prohibited. The Information Management Section, telephone no. (214) 665-6750, and the appropriate state agency shall be notified of test failure within 24 hours. A written report shall be provided to this office within 7 days after failing the TCLP. The report will contain test results, certification that unauthorized disposal has not occurred and a summary of alternative disposal plans that comply with RCRA standards for the disposal of hazardous waste. The report shall be addressed to: Director, Multimedia Planning and Permitting Division, EPA Region 6, Mail Code 6PD, 1445 Ross Avenue, Dallas, Texas 75202. A copy of this report shall be sent to the Chief, Water Enforcement Branch, Compliance Assurance and Enforcement Division, Mail Code 6EN-W, at the same street address.

2. Sewage sludge shall be tested at the frequency show below in Element 2, Section I.D. for PCBs on those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice.. Any sludge exceeding a concentration of 50 mg/Kg for PCBs shall

not be surface disposed.

3. Pathogen Control

All sewage sludge that is disposed of in a surface disposal site shall be treated by either the Class A or Class B pathogen requirements unless sewage sludge is placed on an active surface disposal site and is covered with soil or other material at the end of each operating day. When reporting on the DMR, list pathogen reduction level attained as A, B, or C (daily cover). When reporting <u>how</u> compliance was met, list Alternative 1, 2, or 3 for Class A, or Alternative Number 1, 2, 3, 4, 5 or 6 for Class B, on DMR.

(a) Six alternatives are available to demonstrate compliance with Class A sewage sludge. All 6 alternatives require either the density of fecal coliform in the sewage sludge be less than 1000 MPN per gram of total solids (dry weight basis), or the density of <u>Salmonella</u> sp. bacteria in the sewage sludge be less than three Most Probable Number per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed; at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land. Below are the <u>additional</u> requirements necessary to meet the definition of a Class A sludge.

<u>Alternative 1</u> - The temperature of the sewage sludge that is used or disposed shall be maintained at a specific value for a period of time. See 40 CFR Subpart 503.32(a)(3)(ii) for specific information. This alternative is not applicable to composting.

<u>Alternative 2</u> - The pH of the sewage sludge that is used or disposed shall be raised to above 12 and shall remain above 12 for 72 hours. The pH shall be defined as the logarithm of the reciprocal of the hydrogen ion concentration measured at 25^{o} C or measured at another temperature and then converted to an equivalent value at 25^{o} C.

The temperature of the sewage sludge shall be above 52 degrees Celsius for 12 hours or longer during the period that the pH of the sewage sludge is above 12.

At the end of the 72 hour period during which the pH of the sewage sludge is above 12, the sewage sludge shall be air dried to achieve a percent solids in the sewage sludge greater than 50 percent.

<u>Alternative 3</u> - The sewage sludge shall be analyzed for enteric viruses prior to pathogen treatment. The limit for enteric viruses is one Plaque-forming Unit per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 40 CFR Subpart 503.32(a)(5)(ii) for specific information. The sewage sludge shall be analyzed for viable helminth ova prior to pathogen treatment. The limit for viable helminth ova is less than one per four grams of total solids (dry weight basis) either before or following pathogen treatment. See 503.32(a)(5)(iii) for specific information.

<u>Alternative 4</u> - The density of enteric viruses in the sewage sludge shall be less than one Plaque-forming Unit per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sludge is prepared for sale or give away in a bag or other container for application to the land.

The density of viable helminth ova in the sewage sludge shall be less than one per four grams of total solids (dry weight basis) at the time the sewage sludge is used or disposed or at the time the sewage sludge is prepared for sale or give away in a bag or other container for application to the land.

Alternative 5 - Sewage sludge shall be treated by one of the Processes to Further Reduce Pathogens (PFRP) described in 503 Appendix B. PFRPs include composting, heat drying, heat treatment, and thermophilic aerobic digestion.

Alternative 6 - Sewage sludge shall be treated by a process that is equivalent to a Process to Further Reduce Pathogens, if individually approved by the Pathogen Equivalency Committee representing the EPA.

(b) Three alternatives are available to demonstrate compliance with Class B sewage sludge.

Alternative 1 - (I) Seven representative samples of the sewage sludge that is disposed shall be collected for one monitoring episode at the time the sewage sludge is used or disposed.

(ii) The geometric mean of the density of fecal coliform in the samples collected shall be less than either 2,000,000 Most Probable Number per gram of total solids (dry weight basis) or 2,000,000 Colony Forming Units per gram of total solids (dry weight basis).

Alternative 2 - Sewage sludge shall be treated in one of the Processes to significantly Reduce Pathogens described in 40 CFR Part 503 Appendix B.

Alternative 3 - Sewage sludge shall be treated in a process that is equivalent to a PSRP, if individually approved by the Pathogen Equivalency Committee representing the EPA.

Alternative 4 - Sewage sludge placed on an active surface disposal site is covered with soil or other material at the end of each operating day.

4. Vector Attraction Reduction Requirements

All sewage sludge that is disposed of in a surface disposal site shall be treated by one of the following alternatives 1 through 11 for Vector Attraction Reduction.

Alternative 1 - The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent.

Alternative 2 - If Alternative 1 cannot be met for an anaerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge anaerobically in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. Volatile solids must be reduced by less than 17 percent to demonstrate compliance.

Alternative 3 - If Alternative 1 cannot be met for an aerobically digested sludge, demonstration can be made by digesting a portion of the previously digested sludge with a percent solids of two percent or less aerobically in the laboratory in a bench-scale unit for 30 additional days at 20 degrees Celsius. Volatile solids must be reduced by less than 15 percent to demonstrate compliance.

Alternative 4 - The specific oxygen uptake rate (SOUR) for sewage sludge treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (dry weight basis) at a temperature of 20 degrees Celsius.

Alternative 5 - Sewage sludge shall be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius.

Alternative 6 - The pH of sewage sludge shall be raised to 12 or higher by alkali addition and, without the addition of more alkali shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours at the time the sludge is disposed.

Alternative 7 - The percent solids of sewage sludge that does not contain unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 75 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is disposed. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or an anaerobic treatment process.

Alternative 8 - The percent solids of sewage sludge that contains unstabilized solids generated in a primary wastewater treatment process shall be equal to or greater than 90 percent based on the moisture content and total solids prior to mixing with other materials at the time the sludge is disposed. Unstabilized solids are defined as organic materials in sewage sludge that have not been treated in either an aerobic or an anaerobic treatment process.

Alternative 9 - (I) Sewage sludge shall be injected below the surface of the land.

(ii) No significant amount of the sewage sludge shall be present on the land surface within one hour after the sewage sludge is injected.

(iii) When sewage sludge that is injected below

the surface of the land is Class A with respect to pathogens, the sewage sludge shall be injected below the land surface within eight hours after being discharged from the pathogen treatment process.

Alternative 10 - (I) Sewage sludge applied to the land surface or placed on a surface disposal site shall be incorporated into the soil within six hours after application to or placement on the land.

(ii) When sewage sludge that is incorporated into the soil is Class A with respect to pathogens, the sewage sludge shall be applied to or placed on the land within eight hours after being discharged from the pathogen treatment process.

Alternative 11 - Sewage sludge placed on an active sewage sludge unit shall be covered with soil or other material at the end of each operating day.

5. Methane Gas Control Within a Structure On Site

When cover is placed on an active sewage sludge unit, located in a surface disposal site, the methane gas concentration in the air in any structure shall not exceed 25% of the lower explosive limit (LEL) for methane gas during the period that the disposal site is active.

6. Methane Gas Control at Property Line

The concentration of methane gas in air at the property line of the surface disposal site shall not exceed the LEL for methane gas during the period that the disposal site is active.

D. Monitoring Requirements

Toxicity Characteristic Leaching Procedure (TCLP) Test - Once/Life, performed within one year from the effective date of the permit (For POTWs with a design flow of 1.0 mgd or greater)

PCBs - Once/Year

Methane Gas in covered structures on site - Continuous

Methane Gas at property line - Continuous

All other pollutants shall be monitored at the frequency shown below:

Amount of Sewage Sludge* (metric tons/365 day period)	**Frequency**
0 ≤ Sludge ≤ 290	**Once/Year**
290 ≤ Sludge ≤ 1,500	**Once/Quarter**
1,500 ≤ Sludge ≤ 15,000	**Once/Two Months**
15,000 ≤ Sludge	**Once/Month**

* Amount of sewage sludge placed on an active sewage sludge unit (dry

weight basis).

Representative samples of sewage sludge shall be collected and analyzed in accordance with the methods referenced in 40 CFR Subpart 503.8(b).

SECTION II. REQUIREMENTS SPECIFIC TO SURFACE DISPOSAL SITES WITHOUT A LINER AND LEACHATE COLLECTION SYSTEM.

A. Pollutant limits - Sewage sludge shall not be applied to a surface disposal site if the concentration of the listed pollutants exceed the corresponding values based on the surface disposal site boundary to the property line distance:

TABLE 5

Unit boundary to property line	Pollutant concentration*		
Distance (meters)	Arsenic (mg/kg)	Chromium (mg/kg)	Nickel (mg/kg)
0 to less than 25	30	200	210
25 to less than 50	34	220	240
50 to less than 75	39	260	270
75 to less than 100	46	300	320
100 to less than 125	53	360	390
125 to less than 150	62	450	420
Equal to or greater than 150	73	600	420

* Dry weight basis

B. Management practices - Listed in Section I.B. above.

C. Notification requirements (other than those listed in Part IV of the permit) - (a) The permittee shall assure that the owner of the surface disposal site provide written notification to the subsequent site owners that sewage sludge was placed on the land. (b) The permittee shall provide the location of all existing sludge disposal/use sites to the State Historical Commission within 90 days of the effective date of this permit. In addition, the permittee shall provide the location of any new disposal/use site to the State Historical Commission prior to use of the site.

The permittee shall within 30 days after notification by the State Historical Commission that a specific sludge disposal/use area will adversely affect a National Historic Site, cease use of such area.

D. Recordkeeping requirements - The permittee shall develop the following information and shall retain the information for five years. The sludge documents will be retained on site at the same location as other NPDES records.

1. The distance of the surface disposal site from the property line and the concentration (mg/Kg) in the sludge of each pollutant listed above in Table 5, as well as the applicable pollutant concentration criteria listed in Table 5;
2. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee

understands that there are significant penalties for false certification including fine and imprisonment. See 40 CFR Subparts 503.27(a)(1)(ii) or 503.27(a)(2)(ii) as applicable to the permittees sludge disposal activities;

3. A description of how either the Class A or Class B pathogen reduction requirements are met, or whether sewage sludge placed on a surface disposal site is covered with soil or other material at the end of each operating day;
4. A description of how the vector attraction reduction requirements are met; and
5. Results of a groundwater monitoring program developed by a qualified ground-water scientist, or a certification by a qualified groundwater scientist may be used to demonstrate that sewage sludge placed on an active sewage sludge unit does not contaminate an aquifer.

6. A description of how the management practices listed in I.B. above are met.

E. Reporting Requirements - Reporting procedures are required to be conducted by only those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one million gallons per day, and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. All remaining TWTDS, other than those defined above, are <u>not</u> required to report. If applicable, the permittee shall report annually on the DMR the following information:

1. Report <u>No</u> for no liner and leachate collection system at surface disposal site;
2. The frequency of monitoring listed in Element II, Section I.D. which applies to the permittee;
3. Toxicity Characteristic Leaching Procedure (TCLP) results, if applicable (Pass/Fail);
4. The concentration (mg/Kg) in the sludge of each pollutant listed in Table 5 as well as the applicable pollutant concentration criteria listed in Table 5;
5. The concentration (mg/Kg) of PCB's in the sludge;
6. The distance between the property line and the surface disposal site boundary;
7. Level of pathogen reduction achieved (Class <u>A</u> or Class <u>B</u>), unless Vector attraction reduction alternative no. 11 is utilized;
8. List Alternative used as listed in Section I.C.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met;
9. Vector attraction reduction Alternative used as listed in Section I.C.4;
10. Annual sludge production in dry metric tons/year;
11. Amount of sludge surface disposed in dry metric tons/year;
12. Amount of sludge transported interstate in dry metric tons/year;
13. A narrative description explaining how the management practices in 40 CFR Subpart 503.24 are met shall be attached to the DMR; and
14. The certification statement listed in 40 CFR Subparts 503.27(a)(1)(ii) or 503.27(a)(2)(ii) as applicable to the permittees sludge disposal activities, shall be attached to the DMR.

SECTION III. REQUIREMENTS SPECIFIC TO SURFACE DISPOSAL SITES WITH A LINER AND LEACHATE COLLECTION SYSTEM.

A. Pollutant limits - None.

B. Management Practices - Listed in Section I.B. above.

C. Notification requirements (other than those listed in Part IV of the permit) - (a) The permittee shall assure that the owner of the surface disposal site provide written notification to the subsequent owner of the site that sewage sludge was placed on the land. (b) The permittee shall provide the location of all existing sludge disposal/use sites to the State Historical Commission within 90 days of the effective date of this permit. In addition, the permittee shall provide the location of any new disposal/use site to the State Historical Commission prior to use of the site. The permittee shall within 30 days after notification by the State Historical Commission that a specific sludge disposal/use area will adversely affect a National Historic Site, cease use of such area.

D. Recordkeeping requirements - The permittee shall develop the following information to be retained on site at the same location as other NPDES records and shall retain the information for five years.

1. The following certification statement found in 40 CFR Subpart 503.27(a)(1)(ii):

> "I certify, under penalty of law, that the information that will be used to determine compliance with the pathogen requirements (define option used) and the vector attraction reduction requirements (define option used) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine the (pathogen requirements and vector attraction reduction requirements, if appropriate) have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.";

2. A description of how either the Class A or Class B pathogen reduction requirements are met or whether sewage sludge placed on a surface disposal site is covered with soil or other material at the end of each operating day;
3. A description of how the vector attraction reduction requirements are met; and
4. Results of a ground-water monitoring program developed by a qualified ground-water scientist. A certification by a qualified ground-water scientist may be used to demonstrate that sewage sludge placed on an active sewage sludge unit does not contaminate an aquifer.

E. Reporting Requirements - Reporting procedures are required to be conducted by only those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one mgd, and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment

program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. All remaining TWTDS, other than those defined above, are not required to report. If applicable, the permittee shall report annually on the DMR the following information:

1. Report YES for liner and leachate collection system at surface disposal site;
2. The frequency of monitoring listed in Element 2, Section I.D. which applies to the permittee;
3. Toxicity Characteristic Leaching Procedure (TCLP) results, if applicable (Pass/Fail);
4. The concentration (mg/Kg) in the sludge of PCBs;
5. Level of pathogen reduction achieved (Class A or Class B), unless Vector attraction reduction alternative no. 11 is used;
6. List Alternative used as listed in Section I.C.3.(a. or b.). Alternatives describe how the pathogen reduction requirements are met;

7. Vector attraction reduction Alternative used as listed in Section I.B.4;
8. Annual sludge production in dry metric tons/year;
9. Amount of sludge surface disposed in dry metric tons/year;
10. Amount of sludge transported interstate in dry metric tons/year;
11. A narrative description explaining how the management practices in 40 CFR Subpart 503.24 are met shall be attached to the DMR; and
12. A certification statement that all applicable requirements (specifically listed) have been met, and that the permittee understands that there are significant penalties for false certification including fine and imprisonment (See 40 CFR Subparts 503.27(a)(1)(ii) or 503.27(a)(2)(ii) whichever applies to the permittees sludge disposal activities) shall be attached to the DMR.

ELEMENT 3 - MUNICIPAL SOLID WASTE LANDFILL DISPOSAL

SECTION I. REQUIREMENTS APPLYING TO ALL SEWAGE SLUDGE DISPOSED IN A MUNICIPAL SOLID WASTE LANDFILL (MSWLF)

A. The permittee shall handle and dispose of sewage sludge in accordance with section 405 of the Clean Water Act and all other applicable Federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants that may be present in the sludge. The permittee shall ensure that the sewage sludge meets the requirements in 40 CFR Part 258 concerning the quality of the sludge disposed in the municipal solid waste landfill unit.

B. If requirements for sludge management practices or pollutant criteria become more stringent than the sludge pollutant limits or acceptable management practices in this permit, or control a pollutant not listed in this permit, this permit may be modified or revoked and reissued to conform to the requirements promulgated at section 405(d)(2) of the Clean Water Act.

C. If the permittee generates sewage sludge and supplies that sewage sludge to the owner or operator of a MSWLF for disposal, the permittee shall provide to the owner or operator of the MSWLF

appropriate information needed to be in compliance with the provisions of this permit.

D. The permittee shall give prior notice to EPA (Chief, Permits Branch, Water Quality Management Division, Mail Code 6WQ-P, EPA Region 6, 1445 Ross Avenue, Dallas, Texas 75202) of any planned changes in the sewage sludge disposal practice, in accordance with 40 CFR Subpart 122.41(l)(1)(iii). These changes may justify the application of permit conditions that are different from or absent in the existing permit. Change in the sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR Subpart 122.62(a)(1).

E. The permittee shall provide the location of all new sludge disposal/use sites, where previously undisturbed ground is proposed for disturbance, to the State Historical Commission within 90 days of the effective date of this permit. In addition, the permittee shall provide the location of any new disposal/use site to the State Historical Commission prior to use of the site. The permittee shall within 30 days after notification by the State Historical Commission that a specific sludge disposal/use area will adversely affect a National Historic Site, cease use of such area.

F. The permittee shall complete the following evaluation of the sewage sludge generated by the facility. The permittee shall retain this information on site and it shall be made available for inspection purposes within three years of the effective date of the permit.

   a. An annual quantitative tabulation of the ultimate disposition of all sewage sludge (including, but not limited to, the amount beneficially reused, landfilled, surface disposed, and incinerated).

   b. An assessment of technological processes and an economic analysis evaluating the potential for beneficial reuse of all sewage sludge not currently beneficially reused, including a listing of any steps which would be required to achieve the sludge quality necessary to beneficially reuse the sludge.

   c. A description of, including the expected results and the anticipated timing for, all projects in process, in planning and/or being considered which are directed towards additional beneficial reuse of sewage sludge.

   d. A listing of the specific steps (controls/changes) which would be necessary to achieve and sustain the quality of the sludge so that the pollutant concentrations in the sludge fall below the pollutant concentration criteria listed in Part XIII, Element I, Section III, Table 3 of the permit.

   e. A listing of, and the anticipated timing for, all projects in process, in planning, and/or being considered which are directed towards meeting the sludge quality referenced in (d) above.

G. Sewage sludge shall be tested once during the life of the permit within one year from the effective date of the permit in accordance with the method specified at 40 CFR Part 268, Appendix I (Toxicity Characteristic Leaching Procedure (TCLP)) or other

approved methods on those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one mgd, and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. Sludge shall be tested after final treatment prior to leaving the POTW site. Sewage sludge determined to be a hazardous waste in accordance with 40 CFR Part 261, shall be handled according to RCRA standards for the disposal of hazardous waste in accordance with 40 CFR Part 262. The disposal of sewage sludge determined to be a hazardous waste, in other than a certified hazardous waste disposal facility shall be prohibited. The Information Management Section, telephone no. (214) 665-6750, and the appropriate state agency shall be notified of test failure within 24 hours. A written report shall be provided to this office within 7 days after failing the TCLP. The report will contain test results, certification that unauthorized disposal has not occurred and a summary of alternative disposal plans that comply with RCRA standards for the disposal of hazardous waste. The report shall be addressed to: Director, Multimedia Planning and Permitting Division, EPA Region 6, Mail Code 6PD, 1445 Ross Avenue, Dallas, Texas 75202. A copy of this report shall be sent to the Chief, Water Enforcement Branch, Compliance Assurance and Enforcement Division, Mail Code 6EN-W, at the same street address.

H. Sewage sludge shall be tested as needed, or at a minimum, once/year in accordance with the method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846).

I. Recordkeeping requirements - For those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one mgd, and POTWs that serve 10,000 people or more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. - The permittee shall develop the following information and shall retain the information for five years.

1. The description, including procedures followed, and results of the Paint Filter Tests performed; and
2. The description, including procedures followed, and results of the TCLP Test.

J. Recordkeeping Requirements - For all other TWTDS not meeting the above criteria, the permittee shall keep records on the following:

1. The description and results of the tests performed, required by the owner/operator of the MSWLF to demonstrate compliance with the 40 CFR Part 258 regulations; and
2. A certification that sewage sludge meets the requirements in 40 CFR Part 258 concerning the quality of the sludge disposed in a municipal solid waste landfill unit.

K. Reporting requirements - Reporting procedures are required to be conducted by only those publicly owned treatment works (POTWs) (defined as a treatment works treating domestic sewage that is owned by a municipality or State) with a design flow rate equal to or greater than one mgd, and POTWs that serve 10,000 people or

more, or any POTW required to have an approved pretreatment program under 40 CFR Subpart 403.8(a) for each final sewage sludge reuse or disposal practice. All remaining TWTDS, other than those defined above, are not required to report. If applicable, the permittee shall report annually on the DMR the following information:

1. Results of the Toxicity Characteristic Leaching Procedure Test conducted on the sludge to be disposed, if applicable (Pass/Fail);
2. Annual sludge production in dry metric tons/year;
3. Amount of sludge disposed in a municipal solid waste landfill in dry metric tons/year;
4. Amount of sludge transported interstate in dry metric tons/year; and
5. A certification that sewage sludge meets the requirements in 40 CFR Part 258 concerning the quality of the sludge disposed in a MSWLF unit shall be attached to the DMR.

ADDENDUM A

ENDANGERED SPECIES GUIDANCE

I. INSTRUCTIONS

A list of species that may be affected by the activities covered by the sewage sludge general permit should be obtained from the nearest State Wildlife Agency, United States Fish and Wildlife Service (USFWS), and the National Marine Fishery Service (NMFS). In order to get coverage, applicants must:

- Indicate in box provided on the notification letter whether any species listed are **in proximity** to the facility, and

- Certify that sewage sludge generation, treatment, land application, surface disposal, and disposal of sludge in a municipal solid waste landfill, are not likely, and will not be likely to adversely affect species.

To do this, please follow steps 1 through 4 below.

STEP 1: REVIEW THE COUNTY SPECIES LIST TO DETERMINE IF ANY SPECIES ARE LOCATED IN THE DISCHARGING FACILITY COUNTY:

If no species are listed in a facility's county or if a facility's county is not found on the list, an applicant is eligible for coverage and may indicate in the notification to EPA that no species are found in proximity and provide the necessary certification. *If species are located in the county, follow step 2 below.* Where a facility is located in more than one county boundary or located in more than one county, the lists for all relevant counties shall be reviewed.

STEP 2: DETERMINE IF ANY SPECIES MAY BE FOUND "IN PROXIMITY" TO THE FACILITY AND IF THE SPECIES COULD BE ADVERSELY AFFECTED BY THE TWTDS OPERATION:

A species is in proximity to a facility's sewage sludge operation when the species is:

- Located in the immediate area through which or over which sewage sludge is generated, treated, land applied, surface disposed or disposed in a municipal solid waste landfill.

The area in proximity to be searched/surveyed for listed species will vary with the size of the TWTDS and the quality and quantity of the sewage sludge. Applicants should use the method or methods which best allow them to determine to the best of their knowledge whether species are in proximity to their particular facility. These methods may include:

- Conducting visual inspections: This method may be particularly suitable for TWTDS that are smaller in size (including land application, surface disposal, and municipal solid waste landfill sites), and TWTDS located in non-natural settings such as highly urbanized areas or industrial parks where there is little or no nature habitat. For other facilities, a visual survey of the site may be insufficient to determine whether species are likely to be located in proximity to the discharge.

- Contacting local/regional conservation groups. These groups inventory species and their locations and maintain lists of sightings and habitats.

- Conducting a formal biological survey. TWTDS (including land application, surface disposal, and municipal solid waste landfill sites) with extensive land use may choose to conduct biological surveys as the most effective way to assess whether species are located in proximity and whether there are likely adverse effects.

- Contacting the nearest State Wildlife Agency or U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) offices. Many endangered and threatened species are found in well-defined areas or habitats. That information is frequently known to state or federal wildlife agencies. FWS has offices in every state. NMFS has regional offices in: Gloucester, Massachusetts; St. Petersburg, Florida; Long Beach, California; Portland, Oregon; and Juneau, Alaska.

The USFWS and NMFS will respond with a determination of likely or not likely to adversely affect. If no species are in proximity, an applicant is eligible for coverage under this general permit and may indicate that in the notification and provide the necessary certification. Potential adverse effects from sewage sludge include:

- Hydrological. Sewage sludge may cause contamination of surface and ground water through improper disposal and reuse activities. These effects will vary with the amount and quality of the sewage sludge reused and/or disposed and the location of the surface and ground water, and the volume and condition of the receiving water.

- Habitat. Sewage sludge may cover listed species habitat.

- Toxicity. In some cases, pollutants in sewage sludge may have toxic effects on listed species.

The scope of effects to consider will vary with each site. If a proposed project is not likely to adversely affect a listed species, then the applicant has met the permit requirements. If the proposed action is likely to adversely affect a listed species, the applicant will already be in contact with the USFWS or NMFS for guidance on how to proceed to the next step, whether if be conducting surveys or determining what measures could be taken to avoid the adverse effect.

Using earlier ESA authorizations for general permit eligibility: In some cases, a facility may be eligible for coverage because actual or potential adverse effects were addressed or discounted through an earlier ESA authorization. Examples of such authorization include:

- An earlier ESA section 7 consultation for that facility.
- A ESA section 10(a) permit issued for the facility.
- An area-wide Habitat Conservation Plan applicable to that facility.
- A clearance letter from the Services (which discounts the possibility of an adverse impacts from the facility).

In order for applicants to use an earlier ESA authorization to meet eligibility requirements: 1) the authorization must adequately address impacts from final reuse or disposal activities on endangered and threatened species, 2) it must be current because there have been no subsequent changes in facility operations or circumstances which might impact species in ways not considered in the earlier authorization, and 3) the applicant must comply with any requirements from those authorizations to avoid or mitigate adverse effects to species. Applicants who wish to pursue this approach should carefully review documentation for those authorizations ensure that the above conditions are met.

If adverse effects are not likely, an applicant is eligible for general

permit coverage and may indicate in the notification to the EPA that species are found in proximity and provide the necessary certification. *If adverse effects are likely, follow step 3 below*.

STEP 3: DETERMINE IF MEASURES CAN BE IMPLEMENTED TO AVOID ANY ADVERSE EFFECTS:

If an applicant determines that adverse effects are likely, it can receive coverage if appropriate measures are undertaken to avoid or eliminate any actual or potential adverse affects prior to applying for permit coverage.

At this stage, applicants have contacted the USFWS and/NMFS to see what appropriate measures are suitable to avoid or eliminate adverse impacts to species.

If applicants adopt these measures, they must continue to abide by them during the course of permit coverage.

If appropriate measures are not available, the applicant is not eligible at that time for coverage under the general permit. Applicants should contact the appropriate EPA regional office about either:

- Entering into Section 7 consultation in order to obtain general permit coverage, or

- Obtaining an individual sewage sludge only permit.

ADDENDUM B

National Historic Preservation Act Compliance Guidance

The permittee shall submit the following information:

a) A letter succinctly describing the proposed action.
b) A 7.5' topographic map showing the projected location.

The information shall be forwarded to:

State Historic Preservation Program
1500 Tower Building
323 Center
Little Rock, Arkansas 72201

The permittee should be aware there is a 30-day review period from the receipt of the project information in the State Historic Preservation Office.

Signed this _____ day of _____, 1998

_____
William B. Hathaway
Director, Water Quality Protection Division (6WQ)
EPA Region 6